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ABSTRACT

The Investigation into Information Requirements of the Social Sciences (INFROSS) set out to obtain a general idea of information requirements in all the social sciences. This document, research report no. 2, focuses upon the information needs of social scientists in government departments. All the main government agencies in London believed to employ a significant number of social scientists were contacted. Interviews were then conducted which revealed that government social scientists are generally well served by information systems. Library and information facilities are excellent and well used. Informal communication within departments is good. Two problems face government social scientists: (1) information they need is often not available in the form they require, and (2) the non-comparability of statistical information. Improved bibliographic services and more up-to-data abstracting and indexing services would help answer some of the information needs of social scientists in the government. (Data obtained from the interviews is appended in tabular form.) (SG)

Investigation into Information Requirements of the Social Sciences

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Research Report no. 2

INFORMATION REQUIREMENTS OF SOCIAL SCIENTISTS IN GOVERNMENT DEPARTMENTS

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Contents

1. INTRODUCTION

1.1 Background

The Investigation into Information Requirements of the Social Sciences (INFROSS) set out to obtain a general picture of information requirements in all of the social sciences. The main part of the Investigation, by quesionnaire, concentrated on researchers, most of whom were in universities and research institutes; the results of this are reported in detail in Research Report no. 1.

Among the social scientists not covered by the questionnaire were social workers, teachers in colleges of education and schools, and social scientists in industry and government departments, other than those identified as researchers during the sampling for the circulation of the questionnaires. Social scientists in industry were not approached at all; a preliminary attempt to study them showed the difficulties, and perhaps meagre rewards, of doing so. Teachers and social workers are covered in Research Reports nos. 3 and 4; this report deals with social scientists involved in research in government departments.

1.2 Method

The main part of INFROSS involved the mailing of a questionnaire to a sample of approximately two in every seven social science researchers; the sampling frame used was compiled from Commonwealth Universities Yearbook and Scientific Research in British Universities and Colleges, volume 3: Social Sciences (1968 edition). The latter includes social scientists in government departments and other institutions in so far as they are doing specific research; this meant that a number of social scientists (64) in government departments received the questionnaire, and of these 31 responded. However, the coverage of social science researchers in SRBUC is incomplete, at any rate for those researchers not working in universities. A category for government departments was included in the coding of the questionnaire, and the relevant findings are included in this report at appropriate points.

The questionnaire was drawn up mainly with university researchers and teachers in mind, and although it could perhaps have been modified for use with government social scientists, a number of reasons told against this. For example, preliminary interviewing of social scientists in government departments in Newcastle upon Tyne showed that much of the questionnaire was inapplicable to information requirements in such an environment, and that there were on the other hand information activities and needs not covered by the questionnaire. The type of work undertaken, and the information required by social scientists in government departments, do not fall clearly into the category of 'research', at least in the same sense as the basic research done in universities. The time limits imposed on specific enquiries, the short-term nature of much research, the need to use research to solve practical problems, and the nature of the subject matter are some of the features distinguishing research in universities from work in government departments. In universities, most research is in the nature of research projects; in

government departments, many individuals are conducting either continuing research, gathering data and providing papers on an issue of continuing importance, or are concerned to find specific answers to particular problems as they arise, often within a very short time limit. The typical product of research in government departments is not a book or an article, but a report or memorandum to a government official.

A questionnaire designed specifically for government social scientists was actually considered, but during preliminary interviewing, large differences between government departments were apparent, as well as the usual differences between individuals. To have devised a questionnaire applicable to each department, as might have been required, would have been a major undertaking. The total number of social science researchers in government departments is small, compared with the number in universities, and the construction of specially designed questionnaires for each department, with the preliminary interviewing needed, would have consumed more time and effort than comprehensive interviewing. Moreover, it proved necessary to enquire in detail about the nature of the work involved, before obtaining details about the types of information required and the sources of information used. Finally, it would have been very hard to obtain a statistically valid sample of social scientists in government departments representing all aspects of interest and research.

In any case, as this investigatio was breaking new ground, semi-structured interviews gave far more flexibility than questionnaires could have given. The method used was therefore to interview a number of social scientists in government departments, and it is on the results of these interviews that this report is mainly based (supplemented, as explained, by relevant data from the questionnaires). 66 individuals in all were interviewed, including 4 librarians. 50 of these (including the 4 librarians) were in central government, the remaining 16 in regional offices of government. Some of the interviews were conducted in groups; the numbers of interviews conducted respectively in central government departments and in regional offices were 22 and 11. Interviews took place between November 1968 and July 1969.

This report deals with the material yielded by both the interviews and the questionnaires. Because numbers are not large, and because interviews, while a valid method of investigation, did not yield highly reliable and quantifiable data, the results reported must be regarded as indicative rather than definitive.

1.3 Selection of individuals for interviews

All the main government ministries and departments in London believed to employ social scientists on a significant scale were approached. In the first instance the Academic Liaison Officer or a senior official in the department was approached, with a request to visit the department and to interview a number of social scientists. This proved a successful method for obtaining, in a relatively easy way, a group of social scientists in each department, but it produced a bias in favour of relatively senior civil servants, since the Academic Liaison Officers usually approached senior staff in the first instance.

This method of selection sometimes hit upon civil servants whose role was entirely administrative, although they usually had qualifications in one or other of the social sciences; in such cases an overall picture of the research interests and activities of the department was gained, and this proved useful in identifying other members of the department and making contact with them. All ministries and departments approached expressed interest in the Investigation, and we received full cooperation.

In addition to central offices of government, contacts were also made with regional offices of government in Birmingham, Bristol and Cardiff (also Newcastle upon Tyne in the preliminary stage of INFROSS).

A list of ministries and departments interviewed is included as Appendix A.

1.4 Conduct of interviews

Except for the interviews at the regional offices in Bristol, the Ministry of Housing and Local Government and the Department of Economic Affairs in London, each interview was conducted by a single interviewer. With the exception of the Planning Section of the MHLG, the Ministry of Health and Social Security and the Treasury, interviews were with one person at a time, usually lasting from 1-1½ hours. The interviews were semi-structured; that is, the interviewer had a check list of points on which he wanted information, and if information did not emerge spontaneously during the interview, he prompted the persons interviewed. This was preferable to a closely-structured interview, as it gave interviewees opportunity to mention problems which had not necessarily been provided for by the check list, and since they were mentioned spontaneously by interviewees, they did not have an artificial structure imposed on them by the interviewer. (For check list used, see Appendix B).

It usually proved possible to obtain information about the following:

(i) nature of work
(ii) types of information required
(iii) range of subjects covered
(iv) sources of information used
(v) urgency
(vi) time available for searching
(vii) comments on sources, preferences etc.
(viii) acceptability of processing and filtering.

The idea of tape-recording interviews was considered in the first instance, but there could well have been some resistance to this in government departments, and in any case the time required for full transcription and analysis would have been excessive in the context of our investigation. The interviewer therefore took notes during the interview and wrote the interview up more fully afterwards.

1.5 Analysis of interview data

An attempt has been made to produce a limited amount of numerical data, in tabular form, derived from post-coding of interviews. The

interview reports were read through carefully and a coding frame produced for those aspects which appeared quantifiable, relying partly on categorisations derived from the postal questionnaire, and partly on subjective assessment. Not all of the questionnaires were analysed in this way; some of the early ones in particular did not lend themselves to this sort of analysis, and it would obviously have been wrong to impose an artificial structure on them. In all, 32 of the interviews with central government departments, and 11 interviews with regional offices of government, lent themselves to this analysis. The resulting data is presented in Tables I1 - I4. The use of quantification should not be held to imply precision in the data; it should be stressed that the findings are more impressionistic than scientific, and no attempt was made to apply any statistical tests to the data.

It will be seen that the tables include categories for university teachers and college of education lecturers; the data for these two categories is derived from the interviews with the individuals concerned, not from the research questionnaires (since the data obtained from these was not comparable).

21 out of the 32 government social scientists included in the tables were economists, though the proportion of economists in the total sample interviewed was a good deal smaller. This is partly because interviews with economists tended by pure chance to occur later than other interviews, partly because the data obtained from these interviews was more readily quantifiable than that obtained from interviews with researchers in other subject areas.

1.6 Questionnaire data

As already explained, relevant data from the research questionnaire is included where appropriate. Tables Q1 - Q8 give analyses for this material. Details of the sampling frame and coding, and fuller analyses of the results, are given in Research Report no. 1. The respondents coded as 'Government' include, in fact, one respondent from industry, but he had been employed in the Department of Economic Affairs until not long before he received the questionnaire. The tables have been constructed so as to compare the behaviour of those in government departments with that of the generality of respondents. These tables are based solely on the questionnaire data, i.e. no material from interviews, whether with government social scientists or other researchers, has been included.

It will be noted that the proportion of economists covered by the research questionnaire (6 out of 31) is much smaller than the proportion of economists covered by the interviews as tabulated (21 out of 32). Some of the explanation for this can be found above (see 1.5); another explanation is that the kind of research project listed in SRBUC tended to fall within sociological, psychological or educational fields, while many of the economics researchers in government departments were involved in continuous or short-term research rather than projects, for fairly obvious reasons.

2. FINDINGS AND DISCUSSION

2.1 Type of activity

A careful distinction must be made between the information requirements of social scientists in government employment, and the information requirements of government departments as such for the results of social science research. These two categories of requirement may of course in some instances overlap. The present report is concerned, in the main, with the information requirements of social scientists in government departments. In many cases they were reluctant to describe their work as research, especially as compared with research in universities, but their methods of approach and the material they used approximate in many ways to those of university researchers. A good deal of their work was involved with data collection and report writing; even here bibliographic references were required, although the time was not usually available for a thorough literature search.

An example of the sort of work undertaken, and the pressures involved, is a request made to the Department of Economic Affairs for an assessment of the effects of the devaluation in 1948, at the time when the Government was planning the devaluation of 1967. The DEA was given about three weeks in which to produce a paper on the subject, though the topic might well have been a suitable one for a doctoral thesis in a university situation. The pressures in such a situation are obviously very great, and the speed with which the information was required is by no means untypical.

The social scientists in government departments covered by the questionnaire did not differ greatly from the total sample in the length of time they had spent on their projects, though a rather higher proportion (45%, compared with 35%) had spent over one year. Nor did the time limits within which they had to operate differ much; 39% had no time limit (compared with 45% of the whole sample). A much higher proportion of projects had time limits imposed by the institution (32%) than with the sample as a whole (11%). Three of the government respondents to the questionnaire were working for higher degrees.

The type of activity carried out in regional offices of government appears to vary a good deal from region to region. Some regional offices were much more research-conscious than others, and this obviously affected the nature of their information requirements.

2.2 Information services available

Social scientists in government departments are usually physically close to the bibliographic tools that form part of most libraries, and in most cases their attitude to primary and secondary published material was much closer to that found amongst university researchers than amongst social science practitioners. Most government ministries and departments have good libraries, and in many cases positive information services are available; there is however immense variation, due largely to historical reasons. For example, the Ministry of Housing and Local Government had

at the time the interviews were held a very large and very good library, compared with the Department of Economic Affairs, which had only comparatively recently been established. In most cases, however, the book-stock, within its limited scope, usually compares favourably with that in many academic libraries, and in addition many government departments have special services some of which are not to be found at all in academic libraries. These include:

(i) Circulation of contents pages of periodicals, with a back-up service of photocopies of journal articles as required. In some departments the circulation of contents pages was standardised to all individuals, in other departments users could select the periodicals of which they wanted contents pages copied.

(ii) Monthly lists of selected titles of current periodicals, sometimes annotated.

(iii) Lists of recent acquisitions.

(iv) The compilation of special bibliographies on request.

(v) Personal reference service, usually given by a member of the library staff.

During the visits to government ministries and departments, the opportunity was taken where possible to visit their libraries. The impression that social scientists in government departments were well provided with library and information services was supported during the interviews; most interviewees expressed considerable satisfaction with the services available to them. Reference to Table Q1 shows that government social scientists used relatively fewer libraries than did social scientists generally, one half of them using only one or two libraries. Moreover, their own library satisfied a good deal of their requirements; they rated their own library appreciably higher in this respect than did respondents from other institutions (Table Q2).* As can be seen from Table Q3, the use of photocopies is extremely high in the Civil Service compared with the norm. This may be due to inadequate photocopying services in many libraries, and the limited funds available for copying in them. A more probable explanation is

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*The reconstruction of government ministries and departments from time to time can obviously cause very serious problems for library services; the integration of several ministries into one larger department (such as the new Department of the Environment) can lead to bigger and better libraries, though stocks cannot always be easily integrated; on the other hand, the splitting of a ministry, or the creation of new ministries or departments dealing with matters previously dealt with by several ministries, can create great difficulties. Although it is outside the scope of this report, it may be worth suggesting that there is a need for more standaridsation between the organisation of libraries in government departments, so as to provide more flexibility in cases of government reconstruction.

that the government researcher, with heavy pressures on his time, is more likely to demand a photocopy in place of the original article or book, simply because it saves him time to do so.

Delegation of searching was much more prevalent in government departments than in the academic environment. University teachers often have no one to whom searching can be delegated, whereas the Civil Service hierarchy is such that delegation is usually easy, and pressures on time would make delegation more necessary in any case. 27% of respondents in government departments delegated their searching completely, as against an overall figure of 7% (Table Q4). Table I1 also shows a much greater reliance on library services than is the case with other persons interviewed (it is especially noteworthy that respondents in regional offices of government appear to use general libraries much more than other respondents, though the numbers are too small to draw any safe conclusions from this). Finally, reference to Table I2 shows that whereas a small proportion of other respondents in interviews referred to inadequate libraries as a barrier to the obtaining of information, none of the government social scientists mentioned this.

2.3 Use of primary and secondary materials

The primary and secondary bibliographic materials mentioned in interviews cover a wide range; most of them are listed in Table I3. Abstracts and indexes received relatively little use; so did bibliographies. There are several explanations for this. Probably some searching was delegated to others. Some of the information required would be of such currency that it would not have reached formal secondary sources at all. Thirdly, the type of information required would often not be recorded in formal sources at all; use of journals and monographs was rather less than was the case with university and college users.

A slightly different picture is given by Table Q6, which concerns the estimated usefulness (rather than actual use) of different methods of locating references to published information. A higher proportion of government researchers than of the sample as a whole estimated formal secondary sources as of no use; on the other hand, the same proportion as of the sample as a whole rated them as very useful. An explanation for this is presumably that the researchers identified by the questionnaire were much more akin to university researchers than most of those interviewed; our method of sampling did in fact mean that they were doing something in the nature of a research project, so that one would expect their pattern of use to be not dissimilar to that of university researchers. From Table Q8, it can be seen that a higher percentage of government researchers used abstracts as a means of keeping informed about current literature than of the sample as a whole. Table I4 shows that most of the use made of abstracts and indexes by those individuals included in the interview analyses was for current awareness; only one used them for retrospective searching.

Supplementary data comes from the questionnaire responses, which show that civil servants had far less need for historical and descriptive data than respondents from universities (Table Q5). It is just

this sort of information which is provided by formal sources, and which is subsequently indexed and abstracted. By contrast, the need for statistical material is much greater, while that for methodological and conceptual material does not differ very greatly from the sample as a whole. These findings are not at all surprising, but they are interesting in that they suggest that the formal secondary information system is much more closely geared to researchers in universities than to social science researchers in government departments. (The non-use of 'statistics' in Table I3 may seem surprising; the explanation is that the table refers to published statistics, whereas government researchers are much more concerned with unpublished statistics).

The percentage mentioning journals as a source of information was more than twice as great as that mentioning monographs. This is similar to the pattern in universities. The most obvious explanation is that there are far more journal articles than books, and that research tends to be reported more quickly in article form than book form; in the case of government departments, the circulation of contents pages of current journals may be a small contributing factor.

Much the heaviest demand for formal information sources by social scientists in central government was for 'files'. Each department maintains sets of files, usually in duplicate, with one file per topic; in the Foreign Office and the Commonwealth Office, files are kept for each country. It is difficult to make any general statements about the nature of these files, or about classification of material in them, because there are large differences from one department to another. In general, it can be said that each new topic, especially if related directly to policy-making decisions, receives a file (or files). These files must be distinguished from the personal files of references kept by individual employees; in some cases, social scientists in government departments maintain their own files, though not as often as university researchers. Departmental files must obviously be free from the idiosyncracies of individual employees in order that they may be used by all members of staff, particularly new members. Further details about files in government departments are given in Appendix C.

These files represent a unique collection of information, but retrieval can be difficult. When a department is staffed by members with long experience, the system appears to work well - at least for the department. The problem of retrieval is much greater when one department requires information from another department's files, or information is required by users outside government departments. In fact, when one department wants material from the files of another department, it is usually communicated through the informal system, rather than by direct use of the files. Many interviewees complained that they did not know what material was held by other departments in their files; this is an example of the familiar problem of specifying in detail information needs in the absence of examples of the sort of material available. In other settings this problem can often be overcome to some extent by browsing, but, security considerations apart, browsing through other departmental files would be physically impossible.

In government work the question of security and confidentiality is always present, and it presents a particular barrier to the flow of

information from government departments to outside bodies. This problem is discussed more fully in Research Report no. 1. It may also present a barrier to the free flow of information from one department to another; for example, certain statistics relating to industrial firms may be shown only to the departments scheduled in the Statistics of Trade Act 1947.

2.4 Informal communication

Some of the categories used in the coding of informal channels need explanation. Libraries, both specialised and general, were coded as informal because they are not a 'hard' information channel in the same sense as books and abstracts are. They are able to give a much more personalised service, more in government departments than in the university environment, and even the formal services they provide (such as accessions lists) are not quite in the same category as published bibliographies. The categories 'UK Government' and 'Foreign Government' also require some explanation. These categories include government information services such as the COI Newsletter, as well as personal contact with specialists in foreign government service. The quickest way, for example, to find out the volume of heavy machinery exported from Sweden in the last five years may well be to ring the Commercial Attaché at the Swedish Embassy; such persons are appointed partly to provide information about their country in their specialist field.

Mention has already been made, in connection with use of files, of the importance of informal communication in government departments. There is a tradition of oral communication both within and between departments, and where the information is peculiar to a department and of a transitory and unclassifiable nature, informal channels are the preferred, sometimes the only, means of transfer. The quantifiable data from interviews reported these impressions; reference to Table I1 shows a much heavier reliance on colleagues than is the case in universities and colleges. In central government, reliance on individuals elsewhere is very much less, presumably because colleagues on the spot can provide most of the information required, and because confidentiality may be involved; in regional government, on the other hand, reliance on external sources seems to be greater. It is perhaps surprising to find such a relatively high percentage mentioning conferences as a source of information. The total number of informal channels mentioned by all the civil servants covered by the questionnaire was 125; of these, 70 were some form of personal communication, or conferences.

Again, questionnaire data tallies with interview impressions. All civil servants interviewed, without exception, said that they discussed their work with their colleagues. By contrast, university social scientists tended to spread their informal communication more evenly throughout the various channels available. Reference to Table Q6 shows that 45% of government researchers estimated local colleagues as very useful as a source of locating references to published information, compared with 27% of the sample as a whole. For this particular purpose, individuals elsewhere are used as much as by the whole sample; this difference from the findings of the interviews is probably explained by the type of researcher sampled by the questionnaire, who, as we have seen, probably differs in a number of respects from the individuals interviewed.

2.5 Barriers to the flow of information

During the interviews, questions were asked about factors working against a free flow of information. An attempt was made to codify answers, and the results are given in Table I2; these answers were however difficult to codify, and the operation was only moderately successful.

The main differences from academic researchers lie in two aspects: physical access to printed material - evidently a rather trivial problem for social scientists in central government, but a major problem for those in regional offices of government; and the non-comparability of statistics. Academic researchers use statistics heavily, of course, but they normally use published sources, and complete accuracy and currency are not nearly so essential as for the researcher in a government department, who has to have up-to-date statistics. When, for example, two sets of statistics have both been compiled on a regional basis, but the detailed breakdown by locality differs in various ways, major problems can be created; cross-tabulation is obviously impossible, and the two sets of statistics are much less useful on their own than if they could have been combined. Standardisation in the collection of statistics is obviously highly desirable; since our interviews some steps have evidently been taken towards this.

The relatively greater adequacy of government libraries has already been mentioned (2.2). The social scientist in central government is clearly at an enormous advantage in this respect compared with his regional counterpart.

In Table Q7, foreign material is seen as a much greater problem to the researchers who answered the questionnaire than to the interviewees. This again is almost certainly attributable to the rather different nature of the research these individuals were doing; the projects with which they were concerned would demand more thoroughness in searching than most of the continuing research done by our interviewees, and this in turn would require access to more foreign material. The fact that non-comparability of statistics was not mentioned by any of the respondents to the questionnaire may again be due to the type of work they were doing; the projects on which they were involved probably required less currency, and perhaps less accuracy, than the continuing research of the persons interviewed.

2.6 Other matters

Interviewees were asked how they would go about solving a particular information problem. Some of the accepted methods were mentioned, including browsing, and asking local colleagues and experts; but a large number of individuals noted that there was no present solution to many of their information problems. It may be significant that none of them mentioned in this context the use of bibliographies or reference services, and only one mentioned the use of abstracts. It is evident that much of the work done by social scientists in government departments, concerned as it is with questions of immediate currency, raises information problems of a peculiarly intractable nature.

Persons were also asked to give the name of the most recent book

and periodical article they had read. Perhaps surprisingly, a large number were unable to do so (the interviewer could perhaps have obtained more responses to this question by pressing for an answer, but the answers might not in this case have been accurate). Enquiry was then made about the way in which the book and article had come to their attention. Of the 26 codifiable responses to this question, 31% said they had come across the material by way of a colleague, 19% through book reviews, 19% through references in other journals, and 15% through browsing. Abstracts, bibliographies, and publishers' lists and circulars each accounted for 4%. The data contained in Table Q8 is not strictly comparable, but it does tend to confirm the impressions of interviews; the most striking difference is in the much heavier use of abstracts and other periodicals. However, one would expect attempts to keep up with current literature to have a strong positive element, whereas the latest book or article read might have come their way by chance.

2.7 Conclusions

There appears to have been little attempt hitherto to study the information uses and requirements of researchers in government departments, whether social scientists or not. Our findings are therefore, though not in any way definitive, of considerable interest.

The general picture gained of social scientists in government departments is that, considering the peculiar demands on information systems made by their activities, they are relatively well served, and also contrive to serve themselves relatively well. The library and information facilities available to them are on the whole excellent, and they appear to be exploited fully. Informal communication, at least within departments, is good, and in so far as needed information exists, they generally manage to obtain it.

The major problems faced by government social scientists are two-fold. The first is that they often require information that simply does not exist, at least in the form in which they require it. Indeed, much of their work consists of gathering just this information that is required; where published sources exist, they are often out of date or inadequate, and they have to be supplemented by data collection. In fact, government researchers are producers of information as much as they are consumers; researchers in other institutions need the information produced in government departments on the whole very much more than researchers in government departments need information produced elsewhere.

The second problem relates to statistical material; this has been discussed above (2.5). This problem would appear to be soluble with a fair amount of effort and coordination, and its solution would certainly simplify the work of government social scientists.

The improvement of formal bibliographic services would obviously be of some value to the government researcher, particularly if indexing and abstracting services were much more up-to-date. However, one would suspect that the contribution this would make to the information problems of government social scientists would be very much less than would be the case with researchers in an academic environment.

TABLES

I: Data obtained from interviews

TABLE I1

INFORMAL INFORMATION SOURCES USED

Source	Environment			
	Academic		Government	
	University	College	Central	Regional
	100	100	100	100
(N)	(47)	(24)	(32)	(11)
Fieldwork	34	0	31	9
General library	11	17	0	45
Special library	17	17	38	27
Colleagues	47	46	66	55
Individuals elsewhere	47	33	16	55
Miscellaneous personal	51	4	53	45
U.K. government	17	8	3	0
Foreign government	4	0	3	0
Conferences	6	8	25	9
Professional association	6	0	3	0
Other	26	13	31	73
None used	11	17	6	0

(NOTE: Categories are not mutually exclusive)

TABLE I2

PROBLEMS WITH ACCESS TO INFORMATION

Problem	Environment			
	Academic		Government	
	University	College	Central	Regional
	100	100	100	100
(N)	(47)	(24)	(32)	(11)
Physical access to printed material	23	17	3	85
Non-availability of material	23	8	31	0
Non-comparability of statistics	0	0	31	0
Lack of personal cooperation	4	0	0	0
Computing & statistical problems (access to programs &c.)	9	0	3	0
'Hardware' problems (card sorting, tape recorders &c.)	6	0	0	0
Inadequate library facilities	2	8	0	0
Insufficient time for research	0	4	0	15
Too much information to deal with	0	8	0	0
Difficulties in locating & obtaining foreign material	2	0	3	0
Language problems	6	0	3	0
Other	6	2	6	0
No problem mentioned	38	38	34	15
N/A	21	20	19	7

(NOTE: Since the above table contains collapsed categories it is possible for the same case to appear more than once in a single cell. Percentages represent cases rather than mentions)

TABLE I3

FORMAL INFORMATION SOURCES USED

Channel or format	Environment			
	Academic		Government	
	University	College	Central	Regional
	100	100	100	100
(N)	(47)	(24)	(32)	(11)
Abstracts	23	13	9	9
Indexes	11	38	9	9
Bibliographies	23	0	13	9
Review articles	13	4	0	9
Journals	66	71	47	91
Books	34	63	19	45
Handbooks	17	21	19	55
Statistics	6	13	0	0
Files	4	0	84	36
MSS/Archives	38	13	0	0
Theses	13	21	6	0
Reports	15	0	13	0
Newspapers	26	33	13	27
Trade journals	11	0	3	0
U.K. Govt. publs.	32	8	19	36
Foreign Govt. publs.	9	0	9	0
Other	13	0	16	0
None used	2	0	6	0

(NOTE: Categories are not mutally exclusive)

TABLE 14

NATURE OF USE OF ABSTRACTS AND INDEXES

Use	Environment			
	Academic		Government	
	University	College	Central	Regional
	100	100	100	100
(N)	(47)	(24)	(32)	(11)
Current awareness only	11	21	19	9
Retrospective search only	15	0	0	0
Both	32	33	3	0
Rarely used	26	4	0	0
Not used	15	42	28	91
N/A	2	0	50	0

TABLES

Q: Data obtained from research questionnaires

TABLE Q1

NUMBER OF LIBRARIES USED

Number of libraries	Government	Whole sample
	100	100
(N)	(31)	(935)
1	29	16
2	29	21
3	13	22
4	13	16
5	6	10
6+	6	11
None	3	3

TABLE Q2

ADEQUACY OF OWN INSTITUTION'S LIBRARY FOR RESEARCH

Satisfaction of requirements	Government	Whole sample
	100	100
(N)	(31)	(906)
All	10	4
Most	29	33
Some	42	36
Few	16	24
None	3	3

TABLE Q3

PHOTOCOPYING OF RESEARCH MATERIALS

Extent of photocopying	Government	Whole sample
	100	100
(N)	(30)	(912)
Often	70	39
Sometimes	27	48
Rarely	3	13

TABLE Q4

DELEGATION OF SEARCHING

Degree of delegation	Government	Whole sample
	100	100
(N)	(30)	(912)
Extensive	27	7
Partial	30	21
None	43	72

TABLE Q6

METHOD OF LOCATING REFERENCES
TO PUBLISHED INFORMATION
RELEVANT TO RESEARCH

Method	Estimated usefulness (Percentages)							
	Not at all		Somewhat		Considerably		Very	
	Govt.	Whole sample	Govt.	Whole sample	Govt.	Whole sample	Govt.	Whole sample
(N)	100 (31)	100 (920)	100 (31)	100 (920)	100 (31)	100 (920)	100 (31)	100 (920)
Abstracts or indexes	39	22	13	22	16	23	32	32
Consulting expert	13	16	19	23	29	27	39	34
Colleagues locally	13	13	10	30	32	30	45	27
Individuals elsewhere	13	17	29	29	32	30	26	23
Library catalogues	35	22	19	28	23	28	23	22
Searching shelves: in own institution	35	23	39	32	16	27	10	18
in other libraries	42	34	23	31	16	19	19	16
Consulting librarian	48	48	26	30	13	14	13	8
Specialist bibliographies	65	35	10	25	0	17	26	23
References in books or journals	19	6	13	9	19	26	48	49
Book reviews	32	23	23	34	29	27	16	17

TABLE Q7

SPECIAL INFORMATION PROBLEMS

Problem mentioned (N)	Government 100 (36)	Whole sample 100 (1108)
Difficulty of access to documents	14	14
Non-availability of information	9	11
Lack of comparability in statistics	0	2
Lack of personal cooperation	0	3
Foreign material	20	8
Other	6	16
None mentioned	40	47

TABLE Q8

METHODS OF KEEPING INFORMED ABOUT CURRENT LITERATURE OF RELEVANCE

Method (N)	Government 100 (45)	Whole sample 100 (1683)
Bibliographies	2	2
Books themselves	0	3
Bookshops & book reviews	4	13
Conferences	0	3
Personal communication	20	19
Abstracts & periodicals	51	40
Other	22	20

APPENDIX A List of interviews with government departments

The figure in brackets after each entry in the list indicates the number of individuals interviewed from the section or department.

Central government

Board of Trade

- Distribution of Industry Section (1)
- Economic Adviser (1)
- Statistics Section (1)

Department of Education and Science (5)

Department of Employment and Productivity

- Research and Development Planning Section (1)
- Training Section (1)
- Classification Project (1)
- Psychology (2)
- Assistant Secretary (1)
- Principal (1)

Department of Health and Social Security

- Social Security (1)
- Economic Adviser, Social Security (1)
- Health (1)
- Librarian (1)

Home Office (Research Unit)

- Statistician (1)
- Sociologists (5)
- Psychologists (2)
- Mathematics (1)

Foreign and Commonwealth Office (4)

Ministry of Housing and Local Government

- Economics and Statistics Branches (2)
- Planning Services Division (2)
- Architects Branch, Research & Development Group (1)

Ministry of Overseas Development

- Schools, Teacher Training and Social Education Department (1)
- Administration (1)
- Statistics Division (1)
- Economic Adviser (1)
- Deputy Labour Adviser (1)
- Science and Technology Department - Economic and Social Research Section (1)
- Library (2)

TABLE Q5

USE OF DIFFERENT KINDS OF INFORMATION

(Percentages)

	Historical		Descriptive		Statistical		Methodological		Conceptual	
	Govt.	Whole sample	Govt.	Whole sample	Govt.	Whole sample	Govt.	Whole sample	Govt.	Whole sample
Use made										
(N)	(31)	(923)	(31)	(923)	(31)	(923)	(31)	(923)	(31)	(923)
not used	52	27	32	28	0	9	6	14	6	7
rarely	29	28	35	27	3	15	23	21	16	20
sometimes	16	15	23	22	6	20	29	26	35	25
often	3	30	10	24	90	56	42	39	42	48
Importance										
(N)	(30)	(913)	(30)	(913)	(30)	(913)	(30)	(913)	(30)	(913)
not important	50	28	27	27	0	9	7	15	7	7
little	27	26	40	26	0	12	13	18	20	15
moderate	20	18	17	21	20	20	30	23	33	23
very	3	28	17	27	80	58	50	44	40	55

Treasury (Economic Section)

Economic Advisers (2)
Administration (1)
Librarian (1)

Regional offices of government

Board of Trade, Birmingham (1)

Board of Trade, Bristol

Senior Research Officer (1)

Central Office of Information, Bristol

Principal Press Officer (1)

Department of Economic Affairs, Birmingham (1)

Department of Economic Affairs, Bristol

Senior Research Officer (1)
Assistant Research Officer (1)

Department of Employment and Productivity, Birmingham

Assistant Regional Controller (1)

Department of Employment and Productivity, Bristol

Principal, Employment Services (1)
Manpower Adviser (1)
Training (1)
Youth Employment (1)

Ministry of Housing and Local Government, Birmingham (1)

Ministry of Housing and Local Government, Bristol

Principal Planner (1)
Research Officer (1)

Ministry of Transport, Bristol

Assistant Secretary (1)

Department of Employment and Productivity, Cardiff

Principal (1)

APPENDIX B Check list used for interviews of researchers (including those in government departments)

INTERVIEWS - RESEARCHERS

NAME: .....

AGE GROUP: .....

QUALIFICATIONS: .....

STATUS: .....

YEAR INTO RESEARCH: .....

YEAR APPOINTED TO PRESENT: .....

How do you obtain the information you require for your research? A documentary source, informal such as consulting a colleague, or by generating your own data?

PRESENT RESEARCH .....

.....

.....

during the last seven days? .....

SOURCES .....

.....

.....

discussions with colleagues

references

correspondence

accidental

letters received

telephone calls

readings (what?)

browsing

ENLARGE ON SOURCES FOR IDEAS AND MOTIVATIONS .....

.....

.....

A SPECIFIC EXAMPLE OF A PROBLEM IN YOUR RESEARCH .....

.....

deliberate search

abstracts or indexes or bibliographies

systematic?

KEEPING INFORMED .....

period searches
journals
abstracts
indexes
bibliographies

delegate

relevance to research

evaluation of material received

accidental pick-up when looking for something else

ABSTRACTS AND INDEXES .....

use with difficulty or reluctance?
usability
arrangement (alpha v. class)
terminology
coverage

BOOK .....

when
how come across

ARTICLE .....

when
how come across

CONSTRAINTS TO RESEARCH .....

library

volume of information

languages

ADDITIONAL COMMENTS .....

IMPRESSIONS .....

systematic

persistence

breadth

informal v. formal ratio

APPENDIX C

THE USE OF FILES IN THE CIVIL SERVICE[1]

Files are perhaps the most important channel of information-transfer in the Civil Service, and therefore their nature requires special consideration. There are many sub-classes of files and several different ways of categorising them. A threefold classification is used here.

The first major group of files is policy files.[2] These relate to matters concerning a general topic on which policy decisions are, or may be, required. An example might be the files relating to a British Colony. Files on a particular colony might be kept by:

Foreign and Commonwealth Office	- the political aspects
Ministry of Overseas Development	- economic assistance
Board of Trade	- aspects of trade with the colony
Home Office (possibly)	- matters of nationality and citizenship, and immigration policy

The data in the files of each Department would be duplicated as between Departments in some matters but not in others.

Several duplicate sets of files are kept by each Department. For every file, two full sets of documents (marked "Secret" or "Most Secret") will be kept for the Minister and the Permanent Secretary. One or two further duplicates, with highly classified material removed, will be kept in the Central Registrary for general consultation.

Policy files are opened either as a result of a directive from the Permanent Secretary or Under-Secretary, or on the initiative of one of the lower-ranking personnel. There is no set rule about this. Files opened "from below" either take on a life of their own or die off when the need for them is passed - particularly in the Foreign and Commonwealth Office.

Apart from permanent policy files, temporary ones may be created as the need arises, for one or other of two reasons. If a disconnected piece of information appears which seems to have possible policy implications, a file will be opened to hold it, in the hope that its connexion with a larger area will become apparent; if it is later seen to have a connexion with a larger policy area, the temporary file will be closed and the information in it transferred to another file, but if

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[1] The information in this appendix was given by Mrs. M.B. Williams, BA, Lecturer in Politics, Bath University of Technology, who was for several years in the Executive Class of the Civil Service, and is at present an Observer for the Civil Service Selection Board.

[2] A distinction should be made between a file as a notional entity, and files as physical objects. A single file in the former sense can consist of several boxes of material, and it is in this notional sense that the Civil Service uses the term.

no relationship with anything else becomes apparent, the file concerned will probably become a permanent one. A temporary file is also created on an ad hoc basis when a lower-ranking Civil Servant is asked for comments on a specific topic; in this case a temporary file will be created for him containing such documents as his superiors regard as relevant to the issue which he has been asked to examine.

The second major group of files are particular files. These relate to particular persons or things, and come into being automatically, in accordance with a set procedure. For example, when a person starts his first job or reaches his eighteenth birthday, a file will be created to hold his personal tax-history, or when a building is erected on a piece of land, a file relating to it is created for the purposes of rating and valuation. Such files are closed in accordance with set procedures; when a building is pulled down, the relevant file would be closed after the statutory period has elapsed, then either destroyed, or, in the case of a particularly interesting building, placed in the Public Record Office.

The third type of file is the policy directive or chapter of instructions. Given that the Civil Service is generally organised by desks rather than by persons, and that personnel are frequently moved from one desk to another, each desk has a file attached to it which is virtually an instruction manual on how to carry out tasks assigned to that particular desk.